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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,790	08/04/2003	Robert A. Roth	DP-309885	6893
22851	7590	10/11/2005		
DELPHI TECHNOLOGIES, INC. M/C 480-410-202 PO BOX 5052 TROY, MI 48007			EXAMINER MILLER, CARL STUART	
			ART UNIT	PAPER NUMBER
			3747	

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,790

Applicant(s)

ROTH ET AL.

Examiner

Carl S. Miller

Art Unit

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 17, 19-24, 27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 and 19-24 is/are allowed.
- 6) ☒ Claim(s) 1-12, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Notice of References Cited	Application/Control No. 10/633,790	Applicant(s)/Patent Under Reexamination ROTH ET AL.	
	Examiner Carl S. Miller	Art Unit 3747	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,453,882	09-2002	Schreckenberger, Dieter	123/509
	B	US-2002/0124834	09-2002	Rembold et al.	123/514
	C	US-2002/0050273	05-2002	Tofan-Petre, Cristian	123/457
	D	US-6,532,941	03-2003	Begley et al.	123/497
	E	US-6,457,459	10-2002	Schelhas et al.	123/514
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 12, 13-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell in view of Schreckenberger.

In particular, Figure 1 of Powell teaches all the limitations of these claims except the locating of a filter upstream of a regulator and check valve combination. The regulator will only regulate fuel pressure when the pump is acting since the system will be closed from the regulator and no high pressure will come from the pump.

Schreckenberger teaches using a filter upstream of a regulator and check valve combination.

Also, as noted in the last office action, no output check valve is shown in Powell and since there is a check valve (29) that stops reverse flow to the pump, it would have been obvious to not use a check valve at the pump outlet. This is further obvious in view of the teaching of Schreckenberger which uses a valve downstream of the filter.

It would have been obvious to modify Powell as taught by Schreckenberger since it was common in the art to filter the fuel upstream of the regulator because this practice reduces contaminants being fed to the working parts of the valves and regulators.

Claims 2, 4-8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell in view of Rutan and Schreckenberger.

Powell and Schreckenberger apply as noted above and Rutan generally teaches the coaxial relief valve structure of the claims including an outer valve which will open when subjected to back-pressure.

It would have been obvious to modify Powell as noted above and by using the coaxial structure of Rutan to form the valve since Rutan was also used in an engine environment and meets the compact structure called for by Powell.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell in view of Oberg and Schreckenberger.

Powell and Schreckenberger apply as noted above and Oberg teaches using brass for a check valve used in a fuel environment, thereby making this an obvious material for the check valve of Powell.

Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell in view of Miwa and Schreckenberger.

Powell and Schreckenberger apply as noted and Miwa teaches a maximum fuel pressure for starting at 400 KPa. This means that the regulator would be set to achieve this as a operating pressure. The 600 KPa pressure would have been obvious in order to protect the system at slightly higher pressures, but not excessively higher pressures. The 20 KPa pressure is an obvious low or minimal pressure, just high enough to avoid cavitation when the pump is just starting.

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It would have been obvious to set the valves of Powell at the claimed ranges since one of ordinary skill in the art would have picked such ranges once the maximum operating pressure was selected.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell, Schreckenberger and Rutan as applied to claim 8 above, and further in view of Miwa.

Miwa applies as noted above.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell in view of Briggs and Schreckenberger.

Powell and Schreckenberger apply as noted above and Briggs teaches, at Figure 1, a housing containing all of the claimed elements, thereby making such a compact structure obvious for the Powell system.

Claims 17 and 19-24 are allowed.

Applicant's arguments filed July 11, 2005 have been fully considered but they are not persuasive. In particular, the examiner has now supplied a reference that clearly teaches the claimed location of applicant's filter. As noted above, it would have been obvious to place the filter upstream of the regulator in order to reduce contamination of the moving parts of the various regulators and the examiner has cited several other references to indicate just how common this practice is in the art. The arguments relating to Bader are believed to be moot since the claims in question have now been allowed or cancelled.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl S. Miller whose telephone number is (571)272-4849. The examiner can normally be reached on MTWTHF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Yuen, can be reached at 571-272-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).



Carl S. Miller
Primary Examiner